

II. REMARKS

Claims 22, 28, 34 and 40 are amended. Claims 22-46 are currently pending in this application. Claims 1-21 have been cancelled.

Claims 22, 28, 34 and 40 have been amended to define that the piston phasing means is operable to permit egress of at least some of the pressurized hydraulic fluid that is ingressing into the cylinder member (claim 22 and 28) or the hydraulic cylinder (claim 34) or both the cylinder member and the hydraulic cylinder (claim 40). Support for these amendments can be found throughout the specification and in particular from page 10, line 20 to page 11, line 6 and page 12, line 22 to page 13, line 4.

No new matter is added.

CLAIM REJECTIONS - 35 USC § 102

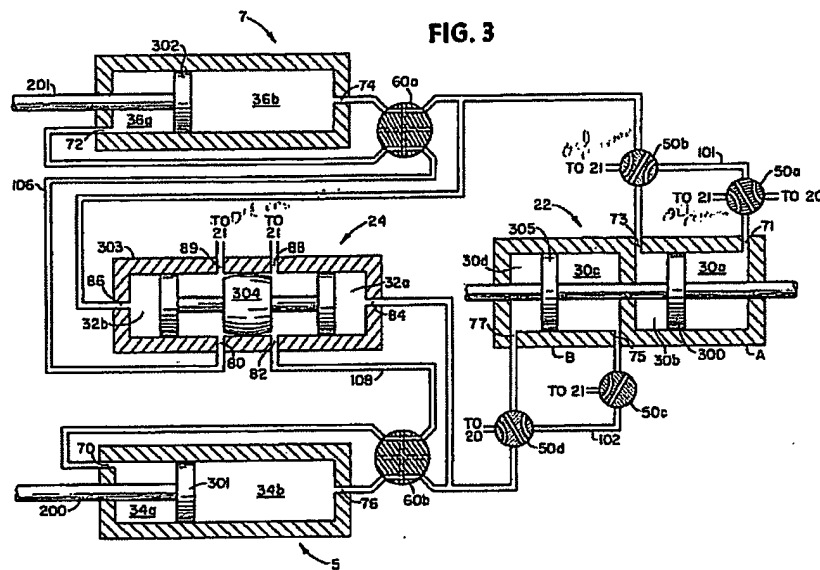
Claims 22, 28 and 34 are rejected under 35 U.S.C. 102(b) as anticipated by Mifsud (US Patent No. 4,161,229). Regarding claim 22, the Examiner alleges Mifsud discloses "a piston phasing means (24) integral with cylinder member (A, B)". Furthermore, regarding claim 28, the Examiner alleges Mifsud discloses "a piston phasing means (24) integral with at least one of the cylinder members (A,B) of said positive displacement means". Additionally, regarding claim 34, the Examiner alleges Mifsud discloses "piston phasing means (24) integral with both of the hydraulic cylinders". Therefore for each of claims 22, 28 and 34, the Examiner interpretation of Mifsud as comprising "piston phasing means (24)" is crucial in maintaining the rejection of claims 22, 28 and 34. Applicants respectfully traverses the Examiner's characterization of Mifsud and its relevance.

The Examiner appears to be suggesting that the drain valve 24 of Mifsud corresponds to the piston phasing means of the present invention. Applicants respectfully submit that the piston phasing means of the present invention works in a completely different way to the drain valve 24 of Mifsud.

In all embodiments of the present invention, when one of the pistons members of the hydraulic cylinders has moved to the extremity of travel during the raising or lowering of the platform, yet the other piston member is trailing and has failed to reach its full extremity of travel, the piston phasing means allows pressurized hydraulic fluid to continue to be supplied to the working chamber of the hydraulic cylinders to permit "catch up" of the trailing piston member and resynchronization (i.e. realigned positioning) of both piston members within the hydraulic cylinders relative to each other, in order to

overcome the problem of the piston members becoming out of alignment due to differences in operation between the two hydraulic cylinders.

The role of drain valve 24 of Mifsud, is "to adjust the flow of hydraulic fluid out of the non-working chambers of the hydraulic lift cylinders so that the pressure in the working chamber of lift cylinder 7 is substantially equal to the pressure in the working chamber of lift cylinder 5" (column 4, lines 53-57). More particularly, drain valve 24 is provided as a separate part of the hydraulic synchronizing system to double-piston power source 22, as may be plainly seen from Fig. 3 thereof, shown below:



Drain valve 24 comprises a cylinder 303 with a piston valve 304 slidably position therein. The piston valve 304 forms, at either end of the cylinder, chambers 32a and 32b containing hydraulic ports 84 and 86, respectively. Port 84 is in fluid communication with the working chamber of lift cylinder 5 and double-piston power source. Port 86 is in fluid communication with the working chamber of lift cylinder 7 and double-piston power source. Hydraulic ports 80 and 89, laterally position within cylinder 303, form a fluid passageway which provides fluid communication between oil reservoir 21 and non-working chamber of lift cylinder 7, allowing hydraulic fluid to flow through the drain valve and thus to the oil reservoir. Likewise, hydraulic ports 82 and 88, laterally positioned within cylinder 303, form a fluid passageway which provides fluid communication between oil reservoir 21 and the non-working chamber of lift cylinder 5 (column 4, lines 25-42).

The drain valve 24 acts to synchronize movement of the pistons within the hydraulic lift cylinders through adjusting the drainage of fluid from the non-working chamber of the hydraulic cylinders. For example, if movement of piston 301 is slower than movement of piston 302 then pressure build up in chamber 32a causes piston valve 304 to move to the left to block ports 80 and 89, which restricts transfer of fluid out of the non-working chamber of lift cylinder 7 to fluid reservoir 21, thereby retarding movement of piston 302 in lift cylinder 7, allowing piston 301 to "catch up" until the pressure in chambers 34b and 36b of drain valve 24 is equalized and movement of the lift cylinders is synchronized. Conversely, if movement of piston 302 is slower than piston 301 then piston valve 304 moves to the right and blocks ports 82 and 88 to retard movement of piston 301, allowing piston 302 to "catch up" (see column 5, lines 25 to 49).

The piston phasing means of the present invention on the other hand, acts to synchronize movement of the pistons within the hydraulic cylinders by allowing pressurized hydraulic fluid to continue to be supplied to the working chamber of the hydraulic cylinders to permit "catch up" of the trailing piston member. This means that when one of the pistons in the hydraulic cylinders has reached the end of its travel, pressurized fluid will continue to flow to the hydraulic cylinders to permit "catch up" of the other piston allowing it too to reach the maximum extent of its travel. By "working chamber" it is meant the chamber into which the hydraulic fluid is being supplied to drive the piston in the hydraulic cylinder, with the "non-working chamber" being the chamber from which the fluid drains from the hydraulic cylinder.

In no way, therefore, does drain valve 24 function as a "piston phasing means" as taught in the present specification.

To further distinguish the present invention from Mifsud, claims 22, 28, 34 and 40 have been amended to emphasize that the piston phasing means is operable to egress at least some of the pressurized hydraulic fluid that is ingressing into the cylinder member or the hydraulic cylinder or both.

Accordingly, nowhere does Mifsud in any manner disclose or suggest:

- i) a positive displacement valve having "piston phasing means operable to permit egress of at least some of the pressurized hydraulic fluid that is ingressing into the cylinder member" (i.e. claims 22-27);

- ii) a hydraulic platform lift, having a positive displacement valve having "piston phasing means operable to permit egress of at least some of the pressurized hydraulic fluid that is ingressing into the cylinder member" of the positive displacement valve (i.e. claims 28-33);
- iii) a hydraulic platform lift, having a right and left hydraulic cylinder having "piston phasing means operable to permit egress of at least some of the pressurized hydraulic fluid that is ingressing into the hydraulic cylinder" (i.e. claims 34-39); or
- iv) a hydraulic platform lift, having a positive displacement valve having "piston phasing means operable to permit egress of at least some of the pressurized hydraulic fluid that is ingressing into the cylinder member" of the positive displacement valve and a right and left hydraulic cylinder having "piston phasing means operable to permit egress of at least some of the pressurized hydraulic fluid that is ingressing into the hydraulic cylinder" (i.e. claims 40-46).

In view of the above comments and foregoing amendments, Examiner is respectfully requested to withdraw the rejection of claims 22, 28 and 34 under 35 U.S.C. 102(b) as anticipated by Mifsud.

CLAIM REJECTIONS - 35 USC § 103

Claims 23-25 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mifsud in view of Gray (US Patent No. 5,110,251).

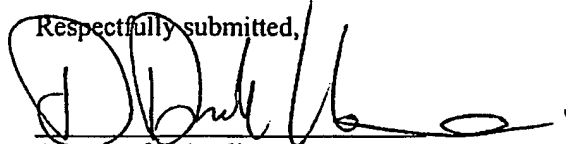
Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mifsud in view of Gray as applied to claim 23, and in further view of Colarelli et al. (US Patent No. 6,189,432).

Claims 35-38, 40-43 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mifsud in view of Gray.

In view of the non-relevance of Mifsud and the fact that the obviousness rejections have been predicated in part on Mifsud, favourable re-consideration of rejected claims 23-26, 29-31, 35-38, 40-43 and 45 with a view to allowance of all claims, is earnestly solicited.

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Applicants' undersigned attorney D. Doak Home, Reg. No. 33,105 may be reached at (403) 298-1994 in the event the examiner should have any questions in respect of the above amendments. All correspondence should continue to be directed to the address given below.

Respectfully submitted,

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